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ABSTRACT

"The purpose of this report was to select and present data on the various levels of education in the State of New Mexico, with particular reference to status, deficiencies and needs in curriculum and instruction. The most significant and relevant information on elementary education (public and non-public), secondary education (public and non-public), Indian education, vocational and technical education, and higher education was collected and analyzed to propose suggestions and recommendations for improvement of curricula and instruction." An attempt was made "to reveal significant areas of educational need coupled with recommendations that may suggest programs and projects to cope with the noted educational deficiencies in the state." A formal observation of innovational practices for curricular and instructional revision in New Mexico schools is appended. (JH)

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AN ANALYSIS OF THE MAJOR DEFICIENCIES IN THE NEW MEXICO SCHOOLS AND RECOMMENDATIONS FOR CURRICULUM AND INSTRUCTIONAL IMPROVEMENT

A Report

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AND

RECOMMENDATIONS FOR CURRICULUM AND INSTRUCTIONAL IMPROVEMENT

A Report Submitted to

The Four Corners Regional Commission

Santa Fe, New Mexico

Research Conducted and Reported

by

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November 26, 1968

To whom it may concern:

The accompanying report was prepared by Dr. Atilano A. Valencia, Curriculum Specialist from the Southwestern Cooperative Educational Laboratory in Albuquerque, as a service for Mr. Arthur Cable, representing the Four Corners Regional Commission.

The report was prepared between November 13, when the request was made, and November 25. Some of the data are therefore somewhat incomplete and complete analysis was impossible. Clearly, however, the recommendations at the conclusion of each section reflect the thinking of more than one individual in the Laboratory, and the Appendix at the end of the report reflects the imaginative thinking of the author.

The report does answer some fundamental questions, but more importantly, it points out where many of the voids in assessment exist and suggests areas of study that need attention.

The Southwestern Cooperative Educational Laboratory is actively involved in efforts to correct some of the problems existing not only in New Mexico, but also in Arizona, Oklahoma and West Texas--service areas for the Lab. All of the materials produced at the Laboratory are available to those who might find them helpful, and we hope we might be called upon in the future to participate further in the extremely important activities being generated by the Commission.

Respectfully,

James L. Olivero

James L. Olivero
Director

JLO/te

PREFACE

The purpose of this report was to select and present data on the various levels of education in the State of New Mexico, with particular reference to status, deficiencies and needs in curriculum and instruction. The most significant and relevant information on elementary education (public and non-public), secondary education (public and non-public), Indian education, vocational and technical education, and higher education was collected and analyzed to propose suggestions and recommendations for improvement of curricula and instruction in the State of New Mexico.

A simple approach was undertaken in the introduction and treatment of the data because of the time limitation for composing the report. Because of this time limitation, it was impossible to collect more detailed and complete information in all of the levels of education, especially data related to higher education. Apart from some unintentional omissions, an attempt was made to reveal significant areas of educational need coupled with recommendations that may suggest programs and projects to cope with the noted educational deficiencies in the State. As a further service to the reader, provided in the appendix is a formal observation of innovational practices for curricular and instructional revision in the New Mexico schools.

The Southwestern Cooperative Educational Laboratory was delighted to serve, on a gratis basis, as a research agency in this study and in the composition of the report. A note of appreciation is extended to all of the State educational divisions for their contribution of conference time and materials. Materials and reports from the Division of Secondary Education, Division of Elementary Education, Division of Vocational-Technical Education, Division of Teacher Certification, Division of Public School Finance, and Board of Educational Finance provided highly relevant information to this study.

SECONDARY EDUCATION

Public Secondary Schools

Introduction

The total number of public secondary schools in New Mexico is 218. This includes: 106 regular high schools; 8 night schools; 2 mid high schools; 2 developing schools that are adding a grade per year; and 99 junior high schools. There are 21 private secondary schools of which 18 are high schools and 4 are junior high schools. In addition there are 9 State and Federal schools. The grand total of secondary schools is 247.

Curriculum

According to State standards, a minimum of 24 units must be offered in grades 9 through 12. Alternate offerings of some courses in successive years is approved if requested and may be counted in the total offerings.

A four year high school (grades 9-12) requires a minimum of 17 units for graduation and three year high school (grades 10-12) requires 13 units. The following course offerings are required: (5:5-6)

1. English: 4 units (may include one unit in related areas such as speech, journalism, business English and reading);

2. Mathematics: 1 unit

3. Social Studies: 2 units, one of which must be the U.S. History and the second from the fields of economics, government, world history, geography, sociology, and American Heritage;

4. Laboratory Science: 1 unit from chemistry, physics, biology, or any other laboratory science approved by the Directory of Secondary Education;

5. Health and Physical Education: at the senior high school (10-12) or four year high school (9-12) level, the equivalent of one period per day for one year; at the junior high school level (7-9), the equivalent of one period per day for one year.

   The State Department of Education has recommended an additional semester of health education for senior high school students. Additionally, it proposes required physical education on a regular basis, daily if possible, for grades 7-9, one semester which would be health instruction.

The number of course offerings vary from district to district and from school to school, with the smaller schools in the rural areas and small towns showing the least number of courses. The following table shows the bulk of the schools offering between 30 to 50 course offerings. (1:7) However, a greater percentage of students are indicated between the categories 71 to 140 course offerings. This observation is based on the greater course offerings of large high schools in the more densely populated areas of the State.

A further observation will reveal a greater number of course offerings among high schools located in the wealthy counties (i.e., Eddy, Lea, and Los Alamos).

The total number of schools and students within a course-offering classification is illustrated below:

Course Offering	Total Number of Schools	Total Number Of Students	Percent of Total Enrollment in each Category
20-25	10	841	1.34
26-29	11	1,208	1.93
30-35	14	2,541	4.05
36-40	17	4,323	6.90
41-50	19	8,708	13.90
51-60	8	4,426	7.07
61-70	7	5,983	9.55
71-80	5	7,540	12.05
81-99	11	17,871	28.53
100-140	5	9,200	14.69
Total	107		

Apart from additional funds to expand a school's instructional resources, alternate year offerings (practiced by only two high schools in the State) and flexible modular scheduling present alternative means for increasing curricular offerings. These two approaches need to be given serious consideration by New Mexico school administrators and faculties.

Basis of Credits (5:6)

Non-Laboratory Courses: a minimum of 200 minutes per week for 36 weeks for a total of 120 clock hours is required for one unit of credit.

Laboratory Courses: a minimum of 275 minutes per week for 36 weeks for a total of 165 clock hours are required for one unit of credit.

In determining units of credit for graduation, music (chorus and band) and physical education are evaluated at a minumum of one-half unit for

Overall, the foregoing table does not represent a dramatic increase in enrollment; however, it calls attention to the fact that high school enrollment continues to increase while first grade enrollment appears to decline.

The foregoing statistics can have several unique implications. In areas where class overloads exist because of population increases, additional facilities and personnel can alleviate the problem. Whether the increased ADA will allocate sufficient State funds to correct the condition remains questionable. In localities where enrollment has stabilized or has decreased, the lower ADA may effect a reduction in State appropriations and prevent needed instructional and curricular improvements or additions. Yet, this effect can be ascertained with greater accuracy in terms of district or county financial ability (resources and taxation base).

The following shows the counties in the State which have suffered a decrease in school ADA between September 1965 and September 1966: (4:141-146)

County	1965-66	1966-67
Catron	15,013	13,573
Colfax	3,569	3,422
DeBaca	704	681
Eddy	14,092	13,395
Guadalupe	1,717	1,707
Harding	449	420
Hidalgo	1,265	1,247
Lea	14,573	14,139
Lincoln	2,092	1,926
Mora	1,542	1,531
Otero	10,378	10,225
Quay	3,123	3,003
Roosevelt	3,627	3,603
San Miguel*	6,501	6,511
Socorro	2,854	2,691
Taos	5,807	5,604
Torrance	1,778	1,750
Union	1,480	1,446

*Although the enrollment statistics for San Miguel County are relatively close, with no decrease indicated in the totals between the two years, it is included in the list because of decreases in enrollment in three out of four schools.

High School Graduates

The number of high school graduates and the percentage of graduates planning to enter college can have important implications in curricular offerings and counseling. The following table, cited from the State of New Mexico Annual Statistical Report of the Superintendent of Public Instruction, reveals that the amount of time required for a full unit in other non-laboratory courses. In those schools which allow greater credit, the seventeen unit requirement is increased.

High school credits in New Mexico, as is true in many other states, are based on a time criteria. State requirements should be relaxed to allow flexible instructional arrangements. In this light, greater emphasis can be given to evaluative measures based on performance as opposed to time criteria.

Enrollment

A report on the status of Secondary Schools in New Mexico, compiled for the State Board of Education in March 1968, shows a total of 108 public high schools and 97 public junior high schools. The State's total enrollment in these secondary schools, as per the first month Average Daily Membership report, was 119,639 students. That total enrollment included the following by secondary grade levels: (2:1)

7th -- 21,932
8th -- 21,611
9th -- 21,610
10th -- 20,382
11th -- 18,176
12th -- 15,928

The number of students enrolling in high school has gradually increased in the past five years. The following table shows high school enrollment at each grade level in September 1967 as compared to September 1963. (3:1)

1st Month's Statewide Enrollment by Grade

Grade	1963-64	1967-68
1	29,484	28,733
2	24,074	25,201
3	22,909	23,621
4	22,694	22,934
5	21,926	23,011
6	21,102	22,185
7	20,398	22,070
8	19,277	21,739
9	19,469	21,797
10	18,975	20,602
11	16,795	18,365
12	12,007	16,143
Ungraded Students		12
Handicapped Children	1,935	2,834
Total	251,045	269,347

the number of high school graduates has more than doubled between the school year 1956-57 and 1966-67. (4:150)

NEW MEXICO PUBLIC HIGH SCHOOL GRADUATES

and

NUMBER PLANNING TO ENTER COLLEGE

1955-56 - 1966-67

School Year	12th Grade Enrollment*	Number of Graduates	% Graduates of 12th Grade Enrollment	Number of Graduates Planning College	% Graduates Planning College
1966-67	16,238	14,481	89.18	7,348	50.74
1965-66	15,989	14,146	88.47	7,056	49.88
1964-65	15,604	13,671	87.61	6,672	48.80
1963-64	12,231	10,874	88.91	4,407	40.53
1962-63	10,396	9,036	86.92	4,540	50.24
1961-62	10,198	8,971	87.97	4,529	50.48
1960-61	10,009	8,776	87.68	4,110	46.83
1959-60	9,300	8,211	88.29	3,759	45.78
1958-59		7,596		3,218	42.36
1957-58		7,055		2,837	40.21
1956-57		6,481		1,428	22.03
1955-56		6,244		1,367	21.89

*As of beginning of school year -
available for last eight years only.

Note: State-supported special schools
included in above figures.

Likewise, the percentage of graduates planning to enter college has increased from 21.89 percent to 50.74 percent. This implies that the retention of high school students in New Mexico is increasing. But it also indicates a need for an effective counseling and guidance program and broader curricular offerings based on student needs and aspirations. That is, schools in New Mexico must offer well-balanced academic and general education courses for college-oriented students and realistic vocational programs for terminal high school graduates. Moreover, a placement and follow-up system needs to be incorporated in the high school counseling and guidance program.

Status of New Mexico High Schools

All high schools are classified as follows on a one year basis only: (5:3-4)

1. Accredited: Those schools which not only meet the standards specified herein but also give significant evidence of going beyond them, thus

indicating qualitative and quantitative excellence which enhances the meaning of an accredited status.

2. Approved: Those schools which meet the standards specified herein.

3. Conditional Status: Those schools which fail to qualify for either of the above classifications. Such schools are not eligible for normal budgetary consideration, and attendance in such schools are not recognized as meeting the state compulsory attendance laws.

The classification of the New Mexico high schools in respect to the aforementioned categories was compiled in a 1968 status report by the State Department of Education. (2:1) Seventy high schools fall in the (A) Accredited classification, twenty-seven in the (AP) Approved category, eight in the (CS) Conditional Status, and three were disapproved. Seventy-eight junior high schools were classified (A) Accredited, twelve (AP) Approved, eight (CS) Conditional, and none were disapproved.

Specifically, the Conditional Status high schools were Reserve, Maxwell, Grady, Animas, Crownpoint, Wagon Mound, Weed, and Des Moines. The Conditional Status junior high schools were Esperanza, Loving, Navajo, Mora, Chama, Tierra Amarilla, Villanueva, and Truth or Consequences. The three disapproved schools were Ramah, Causey and Encino.

The following table shows the Conditional Status and Disapproved schools by grades and enrollment (1968): (6:1-14)

School	Location	Classification	Grades	Enrollment
Weed	Weed	CS	7-12	78
Animas	Animas	CS	7-12	122
Causey*	Causey	CS	9-12	60
Encino*	Encino	CS	7-12	95
Crownpoint	Crownpoint	CS	7-10	127
Ramah*	Ramah	CS	7-10	136
Thoreau	Thoreau	CS	7-11	152
Grady	Grady	CS	7-12	76
House	House	CS	7-12	58
Mosquero	Mosquero	CS	7-12	--
Wagon Mound	Wagon Mound	CS	9-12	122
Esperanza	Albuquerque (Special School)	CS	----	47
Chama	Chama	CS	7- 9	135
Tierra Amarilla	Tierra Amarilla	CS	7- 9	154
Costilla	Costilla	CS	7- 9	70
Villanueva	West Las Vegas	CS	7- 9	60

The schools denoted with an asterisk were listed as disapproved in another State report.

The aforementioned schools have two common factors: low enrollment and location in rural communities or small towns. Poor financial resources is another significant common factor that can be added to the schools listed, with special emphasis to the schools located in the northern counties.

The chief reasons for the given rating (Conditional Status or Disapproved) were: no certified library or guidance services, no preparation periods for teachers, building deficiencies, limited offerings in science (unavailability of science teachers and/or laboratories), teachers with deficiencies or no endorsements, and no vocational offerings.

The deficiencies per school are given in the following table: (2:3-13)

County	School	Status	Deficiences
Bernalillo	Esperanza Jr. H.S.	CS	A special school whose program cannot conform to standards.
Catron	Reserve H.S.	CS	No certified library services. One teacher lacking endorsement.
Colfax	Maxwell H.S.	CS	No certified guidance services. No certified principal. Chorus teacher not endorsed.
Curry	Grady H.S.	CS	No certified library services. One teacher not endorsed for science. One non-degree teacher.
Eddy	Loving Jr. H.S.	CS	No certified guidance service. No prep periods for teachers.
Hidalgo	Animas H.S.	CS	No certified library services. No Fine Arts. One teacher with Elementary Certificate.
McKinley	Ramah H.S.	D	No certified librarian. Science lab is substandard. No vocational offering for girls. Shop building not ready for program underway. Principal's office substandard. Total physical facilities do not compare favorably with those of the rest of the district

County	School	Status	Deficiencies
	Crownpoint Jr. H.S.	CS	No certified library services.
	Navajo Jr. H.S.	CS	Will be closed at end of year.
Mora County	Mora Jr. H.S.	CS	Warning to be issued in regard to building.
	Wagon Mound H.S.	CS	No certified guidance services.
Otero County	Weed H.S.	CS	No certified library services. Four teachers lacking endorsements. No prep periods. Short 14 volumes in library to meet minimum.
Rio Arriba County	Chama J.H.S.	CS	No vocational offerings. Limited library services.
	Tierra Amarilla J.H.S.	CS	Librarian's time must be extended. No vocational offerings.
Roosevelt County	Causey H.S.	D	Three teachers with no prep periods. One teacher not endorsed. English courses in improper sequence. No certified guidance services. Laboratory facilities sub-standard. Science offering on limited scale.
San Miguel County	Villanueva J.H.S.	CS	Limited library services Two teachers with deficiencies. Limited guidance services. No vocational offerings.
Sierra County	Truth or Consequences J.H.S.	CS	Two teachers with deficiencies. No guidance services.
Torrance County	Encino H.S.	D	No certified guidance services. No certified library services. One teacher lacking endorsement in subject areas.

County	School	Status	Deficiencies
Union County	Des Moines H.S.	CS	Principal without administrative certificate. Librarian with minor deficiency.

It is questionable that seventy high schools and seventy junior high schools reflect such high qualitative and quantitative excellence in terms of curriculum, instruction, supplies and equipment. It is suggested that the standards specified in the accrediting criteria, while not discrediting the school, be revised to give a more accurate account of curricular and instructional deficiencies as compared to new techniques and curricular patterns. It is in this light that recommendations can be given so that schools will consider programs and projects to improve instruction and revise curricula with respect to a wider range of needs among the New Mexico multicultural high school population.

It is quite likely that districts with low ratings and poor financial sources will continue to offer a substandard and unrealistic educational program to high school youngsters in their geographical areas. State and regional agencies must take an interest in promoting projects and lending assistance to improve the educational conditions in these districts.

Recommendations

1. It is proposed that State standards for accreditation be revised to encourage school systems to implement more up-to-date and innovative curricular patterns and instructional techniques. Some of these techniques or strategies can have important implications in the learning scheme among youngsters in a bi-cultural setting. Thus bi-cultural education can be an important feature in curriculum and instructional revision.

2. The number of course offerings is critically low, especially among the small schools located in rural communities and small towns. Apart from additional funds to expand the school's instructional resources (e.g., teachers, facilities, and equipment), alternate year courses and flexible scheduling are new ways to increase curricular offerings.

3. The teacher shortage in New Mexico is especially critical in the areas of science and mathematics. The teachers' salary structure needs consideration, especially with reference to deficient curricular areas.

4. The training of teacher aides can be considered as a practical and feasible approach to increase instructional resources. The training and utilization of teacher-aides (non-credentialed) teachers in particular aspects of the instructional program will alleviate part of the teacher shortage problem, while releasing credentialed teachers for involvement in multi-instructional activities (e.g., small group instruction and individualized instruction).

5. Through a cooperative arrangement with teacher-training colleges and universities, schools can advantageously offer their settings to train new teachers. With additional instructional personnel, teachers can be encouraged to use a cooperative team approach in mapping and carrying out instructional strategies.

6. Programmed instruction and other instructional media can be used advantageously to individualize instruction. This, too, will alleviate teacher shortages in acute areas.

7. There is evidence that many inservice training programs in the New Mexico schools are outmoded and ineffective. The implementation of modern preservice and inservice institutes and workshops to train teacher and teacher-aides to use multi-instructional modes and media must be given top consideration throughout the State. Model types of teacher-training programs are available at agencies (e.g., the Southwestern Cooperative Educational Laboratory) that are developing and furthering innovative practices in education.

8. The number of high school graduates in New Mexico has increased in the past 10 years. However, continued attention must be given to the dropout problem, especially among the Spanish speaking population. Thus curricular programs must be realistic for terminal high school students as well as for the college-oriented graduate. School districts must give greater attention to the expansion of vocational programs. Many New Mexico high schools represent small college-preparatory institutions, with deficiencies in the sciences and mathematics. Yet, the percentage of youngsters terminating their education at the 12th grade level remains high.

9. The counseling and guidance system in the New Mexico schools needs up-dating. More attention must be given to individual problems, needs and aspirations. A placement and follow-up system must be implementated in the schools.

10. The concept of an educational continuum needs serious consideration. The evening and summer offerings should be expanded to accommodate drop-outs and graduates who need additonal training.

Footnote References

1. *Statistical Report*: *Relationship of number of High School Course Offerings to Total High School Enrollment* (1967-68 School year). New Mexico Department of Education, Division of Secondary Education, Santa Fe, New Mexico, July, 1968, pp.7.

2. *Report of Status of Secondary Schools*: *Submitted to the State Board of Education*. New Mexico Department of Education, Santa Fe, New Mexico, March 22, 1968, pp 16.

3. *Statistical Report*: *First Month's Statewide Enrollment by Grade (1963-64 1967-68)*. Division of Statistics, State Department of Education, Santa Fe, New Mexico, December, 1967.

4. *State of New Mexico Annual Statistical Report of the Superintendent of Public Instruction* (July 1, 1966 to June 30, 1967). Division of Statistics, State Department of Education, Santa Fe, New Mexico, pp.201.

5. *Standards for New Mexico Schools*: Approved by the State Board of Education, March 22, 1966. Department of Education, Santa Fe, New Mexico. pp. 44.

6. *New Mexico State Department of Education* (*1967-68*) *Directory of Classified Secondary Schools*. State Department of Education, Santa Fe, New Mexico, 1968, pp. 14.

NON-PUBLIC SECONDARY SCHOOLS

Introduction

A total of 27 non-public high schools and 2 non-public junior high schools are operating in the State. The State's total enrollment in these secondary schools, as per the first 80 days, 1967-68 ADM report, was 7,362. (1:1)

In the majority of cases these schools are financed by the people they serve. State and federal funds lend limited assistance to these schools, primarily in providing textbooks. But the overall finances for most of these schools present serious limitations in the instructional programs.

Classification of Schools

A review of the non-public schools reveals the fact that they can be divided into four categories: (1:2)

1. Parochial schools of various denominations, whose instructional programs generally follow the same basic philosophy advocated by public schools. They focus attention on the spiritual development of the student, but they strive to offer a general program to a good cross-section of their communities. They accept the concept of state-certified personnel.

2. Private college preparatory schools, whose philosophy is founded on certain premises not generally accepted by public schools. The program is directed to academic courses that will aid the college-bound student. These schools do not accept the concept of state certified personnel.

3. State and Federal schools that serve a wide range of purposes. Some of these specialize in Indian education; others specialize in vocational education; a third group serves children with serious physical disabilities; and a fourth group specializes in programs designed to rehabilitate delinquent children. Schools in the first two groups accept the concept of state certified personnel. Schools in groups 3 and 4 probably accept the certification concept, but they are unable to practice it.

4. The last category of non-public schools encompasses those private schools that offer clinical services to children with special needs. Such schools usually emphasize the psychological approach in their instructional programs; their classes are small, and their program of studies is usually very limited. These schools generally do not accept the concept of state certified personnel.

The differences that exist among the four categories listed above create serious problems in classification by State standards. Certain concessions have been made; however, the State is mostly concerned with problems in certifying personnel and basic program offerings. The State Department of Education proposes to give concentrated attention to the problem of devising meaningful standards in the accreditation of non-public schools.

Status of Non-Public Secondary Schools

Classification	Number of High Schools	Number of Junior High Schools
A (Accredited)	10	
AP (Approved)	6	
CS (Conditional Status)	11	2

The chief deficiencies noted among the schools were: uncertified teachers and administrators, substandard or non-existing guidance and library services, and no preparation periods for teachers.

The following table illustrates the specific deficiencies among non-public secondary schools with a rating of: (CS): (1:3-6)

School	1968 Status	Grades	Deficiencies
Albuquerque Academy Albuquerque	CS	5-12	Only six of the 38 staff members hold certificates. Administrative and guidance staff are among those without certificates. Otherwise, the school is considered an excellent college prep school.
Calvert Academy Albuquerque	CS	9-12	Very limited program. Administration not certified. No library report. One teacher without certificate.
Harwood High School Albuquerque	CS	7-12	No certified guidance services. Administrator without certificate.
LAR, The School Albuquerque	CS	7-12	One teacher without certificate. One teacher not endorsed in subject area. Substandard program in terms of offerings. Thorough evaluation of school should be made to determine future status.
Rehoboth Mission H.S. Albuquerque	CS	7-12	One teacher lacks endorsement. No certified library services. Administrator lacks certificate.

Sandia School for Girls	CS	5-10	Eight staff members out of eleven without certificates. Administrator not certified.
Sandia View Academy Corrales	CS	9-12	Complete disregard for certification of staff.
San Felipe Junior High School	CS	7-9	The school is closing at the end of current year.
Santa Fe Preparatory School	CS	7-12	Seven out of 14 staff members do not hold certificates. P.E. program limited due to lack of facilities. Otherwise considered an excellent prep school.
St. Mary Regional Junior High School	CS	7-9	One teacher without certificate. Two teachers lacking endorsement in subject areas. Status of guidance and library services questionable.

Comments and Recommendations

Most of the non-public schools, especially the parochial schools, carry college preparatory programs. The inclusion of vocational offerings would be an impossibility without a substantial increase in the budget, and the financial sources of these schools are very limited.

Personnel qualifications, guidance and library services are areas with critical needs. More importantly, the State Department of Education and other agencies need to evaluate instructional methods and curricular offerings in terms of the population that the schools serve. Many of the recommendations given in this study to improve curricula and instruction among the public secondary schools are also relevant and applicable to non-public secondary schools.

Footnote References

1. Status of Non-Public Secondary Schools (1967-68). Submitted to the State Board of Education, May 9, 1968. New Mexico State Department of Education, Santa Fe, New Mexico, 1968, p. 4.

ELEMENTARY EDUCATION

Public Elementary Schools

Definitions

Elementary refers to grades one through eight, unless there is a junior high school program approved by the State Board of Education, in which case it means grades one through six.

Enrollment (1:3)

Average Daily Membership, Per Grade Level, for Years Indicated

	September 1966	September 1967
ADM (Handicapped)	2,431	2,787
1st	29,560	28,390
2nd	24,590	24,948
3rd	23,581	23,389
4th	23,514	22,724
5th	22,497	22,817
6th	21,958	21,971
	148,131	147,026

Although statistics are constantly changing and accurate reporting remains a problem, the above statistics tend to show a rather stable (overall) enrollment between September 1966 and 1967.

Elementary School Status

The status of elementary schools is on a one-year basis and is based on the following criteria: (2:29-30)

1. Approved: This classification identifies those schools which meet fully the adopted standards or whose programs are of such excellence as to offset minor departures from such standards.

2. Approved-Advised: This classification indicates failure to meet one or more standards when such failure does not detract to a serious degree from the quality of the school's educational program. An advisement may be continued beyond one year if the school makes satisfactory progress toward correcting the deficiency, otherwise a warned status is assigned the following year.

3. Approved-Warned: This classification is assigned when a school fails to meet one or more standards and such failure seriously detracts from the school's educational program. Failure to correct deficiencies causing a previous advisement generally results in a warning. The cause of the warning should be removed within a year as a condition for continued approval.

4. Conditional Status: This classification is assigned when a school fails to meet any of the classifications above, but, due to isolation factors, the existence of the school is deemed necessary.

5. Disapproved: This classification is assigned to that school which fails to meet any of the classifications above. That school is not eligible for normal budgetary consideration, and attendance in such a school is not recognized as meeting the state compulsory attendance laws.

Elementary School Status (1:4)

1967-68			
352	A Approved	240	A Approved
97	AA Approved Advised	201	AA Approved Advised
6	AW Approved Warned	6	AW Approved Warned
1	D Disapproved	0	D Disapproved
456		447	

Based on the State criteria for approval, the above statistics reveal a decrease in the (A) Approved category and an increase in the (AA) Approved Advised category. However, a change in status could be affected through a more up-to-date criteria for approval.

The chief reasons for a rating below (A) Approved were: (3:1-63) overloaded classrooms, insufficient reference books (dictionaries and encyclopedias), teachers teaching more than one grade level, non-degree teacher (in a few cases), time adjustments needed for some curricular areas, and (in some schools) inadequate or non-existent library facilities.

Although some improvement was noted in pupil teacher ratio between the year 1966-67 and 1967-68, this problem remains acute.

Pupil Teacher Ratio (1:4)

	1966-67 Overloaded Classrooms	1967-68 Overloaded Classrooms
Grade 1	102	85
Grade 2	101	85
Grade 3	180	127
Grade 4	215	190
Grade 5	227	194
Grade 6	247	190

20.5 percent overloaded 1966-67
16.5 percent overloaded 1967-68

There are, of course, many factors related to the pupil-teacher ratio. Because of physical space too many classrooms are overcrowded with fewer than thirty students. However, this is not necessarily the case in every locality. For example, class overloads in conventional size rooms are found in some of the Albuquerque elementary schools.

Additional Data (1:4)

	1966-67	1967-68
Total number of elementary teachers	5,992	6,087
Number of non-degree teachers	45	28
Bachelors Degree	4,651	4,662
Masters Degree	1,281	1,386
Education Specialists and Doctor	15	14
One teacher schools	15	13
Insufficient library books, dictionaries and reference books	13	49
Schools needing updated texts (books published after 1960)	438	377
Teachers teaching more than one grade level	342	273
Number of centralized libraries	205	226
Schools having classroom collections only	---	111
Classroom collections--central storage includes some 1-12 combined libraries	---	110

According to the State Department of Education, the following were the predominant problem factors among the elementary schools in 1967-68: (1:5)

1. Kindergarten education: With reference to the 1967-68 data, only one child out of ten was getting kindergarten experience at the age of five. A state-wide kindergarten program is highly recommended.

2. Enrollment: When possible, each instructional unit should be of adequate enrollment so that the district can provide a full teaching, administrative, and service staff which is assigned full-time to the unit. Where instructional overloads exist, additional teachers and teacher-aides must be provided.

3. Libraries and Librarians: According to 1967-68 data, 111 of the 450 public schools did not have a beginning in the development of centralized libraries. These schools had classroom collections only. Continuous efforts must be applied to provide library facilities, materials and librarians for the children in these schools.

4. Guidance-Counselors: The guidance-counseling program in the elementary schools require immediate attention. Only 45 full-time and 15 half-time counselors were reported to be employed in the year 1967-68. To maintain a minimum ratio of one counselor to 500 students, as recommended by the State, the recruitment of counselors and a training program for counselor-aides must be given serious consideration.

5. Language Arts Program: The total Language Arts Program needs extensive revision and reemphasis. The Communicative Arts includes English, reading, speech, composition, spelling, and handwriting.

Approximately 40 percent of the children in 1967-68 had serious deficiencies in this area of learning. Thus an all-out effort must be made to improve oral and written skills. An important facet of this program is the inclusion or intensification of bilingual education.

6. Buildings, Grounds, and Equipment: Outmoded buildings and equipment are found in many schools. Most school districts still have some awkward educational problems related to these items. Additional income will provide more footage per classroom, sufficient chalkboards, bulletin boards, book shelving, display tables and other furniture in districts with this type of handicap. Further, playgrounds, multipurpose rooms, cafeterias, art rooms, music rooms, libraries, etc., must be provided where these facilities are inadequate or non-existent.

Recommendations

1. Revision of standards of approval to encourage new curriculum patterns and instructional practices.

2. Continuation of workshops, institutes, and conferences for the improvement of instruction.

3. Up-dating workshops and institutes to reflect new trends and innovative practices in instruction and curriculum.

4. Up-dating supervisory practices (e.g., through micro-teaching) to change or improve instruction techniques.

5. Training programs for teacher-aides and counselor-aides to assist credentialed teachers and counselors in the total instructional scheme.

6. Institutionalizing flexible scheduling to gain efficiency in utilizing teachers and aides in their areas of compentencies.

7. Cooperation with teacher-training institutes to provide a training ground for prospective teachers, while indirectly increasing the availability of teaching assistants.

8. An up-to-date preservice training for incoming teachers to familiarize them with ongoing innovative practices in the system, and a continuous inservice training for all teachers to keep them abreast of new instructional practices and curricula. The foregoing can be promoted in cooperation with teacher-training institutions or other agencies (e.g., the Southwestern Cooperative Educational Laboratory).

Footnote References

1. A General Review of Public Elementary Education in New Mexico (1967-1968). Ralph Drake, Director of Elementary Education, State Department of Education, Santa Fe, New Mexico, 1968, p. 9.

2. Standards for New Mexico Schools. Approved by the State Board of Education, March 22, 1966. State Department of Education, Santa Fe, New Mexico, p. 44.

3. Status of Elementary Schools (1967-1968). New Mexico State Department of Education Report, Santa Fe, New Mexico, 1968, p. 63.

NON-PUBLIC ELEMENTARY SCHOOLS

Introduction

There were eighty-one non-public elementary schools listed in the State Department of Education records for the school year 1967-68. (1:1) Approximately 644 teachers and 15,287 students were involved in non-public elementary education during this same year.

In many of these schools Title I funds were used to strengthen the audio-visual instruction programs. There were other active and planned innovations which were directed to the improvement of the instruction program, i.e., team teaching, the non-graded concept of elementary education, classroom aides, field trips, special in-service training for faculty, school libraries and materials, and other similar innovations. It is proposed that wherever these types of innovations are undertaken, the State Department of Education and other agencies should lend encouragement and assistance. Exciting programs which contribute to instructional improvement can serve as models for many schools (public and non-public) in the State. And the State Department of Education and other agencies can help identify these models and promote implementation in other schools throughout the state.

Status of the Non-Public Elementary Schools

The following table shows the status of the non-public elementary schools in the State based on Standards of Approval: (1:1)

	1965-66	1966-67	1967-68
A	7	14	7
AA	18	29	56
AW	61	37	17
D	0	1	1
	86	81	81

According to the State Department of Education, the Approved-Warned line for the three years attests to the extensive effort and accomplishment of the non-public schools success in striving to meet and in some instances surpass the State Standards. (1:1)

Some of the problems which remain are: (1:1)

1. One-hundred non-degree teachers.
2. Sixteen schools which exceed 30 to 1 overall teacher-pupil ratio.
3. Difficulty in certification due to teacher turnover during the school year, and other causes.

4. Errors in reporting usually caused by improper marking of IBM cards.
5. Two or more grade levels assigned to one teacher in a self-contained classroom organization.

The following table illustrates the specific deficiencies among non-public elementary schools with a rating of (AW) or (D):

School	1968 Status	Grades	Deficiencies
Holy Rosary Albuquerque	AW	1-8	Seven non-degree teachers. Five classroom overloads.
Queen of Heaven Albuquerque	AW	1-8	Three non-degree teachers. Sixteen classroom overloads.
San Jose Albuquerque	AW	1-8	Four non-degree teachers. Eight classroom overloads. No encyclopedia, grade 4.
St. Mary Albuquerque	AW	1-6	Five non-degree teachers. Four classroom overloads. One teacher teaching more than one grade level.
St. Therese Albuquerque	AW	1-8	Two non-degree teachers. Seven classroom overloads.
Roswell Catholic Roswell	AW	1-6	Two non-degree teachers. Four classroom overloads. No encyclopedia, grade 4. Clerical help needed.
Sacred Heart Clovis	AW	1-8	Three non-degree teachers. Five classroom overloads. No encyclopedia, grades 4-8.
OLO Guadalupe Santa Fe	AW	1-8	Six non-degree teachers. Eleven classroom overloads One teacher teaching more than one grade level.
Hilton Mt. Carmel Socorro	AW	1-8	Three non-degree teachers. Four classroom overloads.
St. Anthony Penasco	AW	1-8	Two non-degree teachers. No library appropriation.
St. Mary's Belen	AW	1-8	Four non-degree teachers.
St. Mary's Academy Silver City	AW	1-8	Six non-degree teachers. Two classroom overloads.

School	1968 Status	Grades	Deficiencies
St. Francis DePaul Tularosaa	AW	1-7	Three non-degree teachers.
Cathedral Grade Gallup	AW	1-8	Three non-degree teachers. Six classroom overloads.
Sacred Heart Farmington	AW	1-8	Four non-degree teachers. One teacher teaching more than one grade level. Four classroom overloads.
St. Theresa Grants	AW	1-5	Two non-degree teachers. Four classroom overloads.
Rock Springs Star Route Window Rock, Arizona	D	1-8	Dissapproved subject to proper reporting and improvement of instruction program.
All Tribes Mission Bernalillo	AW	2-8	Two non-degree teachers. Two teachers teaching more than one grade level.

Comments and Recommendations

The major deficiencies pointed out by State Department of Education for schools listed in the foregoing table are non-degree teachers, overloaded classrooms, teachers teaching more than one grade level, and insufficient reference books.

Certification of teachers according to State standards does not necessarily reveal strengths and deficiencies in the instructional program. There is some evidence of innovative practices among the non-public elementary schools. These need to be encouraged and given assistance by the State Department of Education and/or other agencies. Certification standards need to be examined in terms of up-to-date criteria that will reflect innovations in curricula and in modern instructional practices.

Class overloads and teachers teaching more than one grade level are obsolete terms, depending on instructional strategies (e.g., large group instruction and utilization of special teacher competencies). Overall, however, sufficient trained personnel is required to carry forth an effective instructional program. But it is also suggested that teacher-aides (non-credentialed teachers and non-degree personnel) can play an active role in the instructional scheme. Pre-service and in-service training can provide such personnel and identify areas and levels of responsibility.

The recommendations given in this study to improve instruction and curricula in the public elementary schools are relevant and applicable to non-public elementary school as well.

Footnote Reference

1. Recommended Status for non-public Elementary Schools in New Mexico. Ralph Drake, Director of Elementary Education, State Department of Education, May 9, 1968, p. 15.

VOCATIONAL EDUCATION

Introduction

The Vocational and Technical Education Division in the state of New Mexico has more than 25,000 students enrolled in its programs. The indications are that this number should more than double in the next five-year period. (1:1)

At least one vocational program is offered in every county in the State. Most of the high schools in the State offer one or more vocational programs, yet there is a great need for expansion.

The State has four area vocational schools in operation and three more are in the planning states. Three technical institutes and an agricultural institute are in operation with fine curriculums closely allied to business and industry.

The Trade, Industrial and Technical Division of the State Department of Vocational Education has provided instruction to 2,028 students at the secondary level. This involved 38 occupational areas. Seventeen of these occupations were in full-time day trade, the remainder through Industrial Cooperative Training Programs.

Post-Secondary Programs functioning at four institutes provided training on a full-time basis in twelve occupations and on a part-time basis for fifteen. Enrollment has been limited due to facilities and space availability.

Technical level (13th-14th year) programs have remained the same, with no new fields of instruction being offered. Placement of technical graduates is excellent, but the present number of technical graduates does not meet existing needs.

Efforts have been made to determine State needs for industrial training and to meet these needs with the development of additional area schools located on the basis of state survey.

In-service teacher-training has been provided on a limited basis to secondary and part-time instructors of skill and apprentice programs. This type of training should be continued and expanded.

Expansion of Vocational-Technical programs to meet the needs of Post-high students (both high school students and drop-outs) has gained with the availability of new occupations. In this light, Roswell Campus of Eastern New Mexico University has expanded its course offerings. Studies to determine training needs at post-secondary levels should continue, followed with proposals for implementing curricula wherever needed.

Training facilities to meet the needs of those already in the labor market should continue. New methods of instruction must be found for the isolated apprentice, or the person located in a remote or distant area of the State where organized or supervised instruction is not available.

Projections

The projection of financial requirements for the Vocational Technical Division is based primarily on the number of people to be served in the various training programs. Other factors considered are: What agencies will provide the training; where and how programs will be financed; and who will provide the facilities. (2:4)

Estimated Vocational Enrollment Projections (2:4)

	1968-69	1974	1978
Secondary Schools	20,000	26,000	31,000
Post-Secondary	2,100	2,310	3,000
Adults	4,000	5,000	6,400
Special Needs	275	350	500
Total	26,375	33,660	40,900

The regular vocational programs operate on a 50-50 matching basis. The State Vocational Education Division proposes that if vocational-technical education is to be considered a part of the educational structure in the State, it is necessary to set up a system of continued funding such as the State now has for public schools and colleges and universities. (2:4) Because of the facilities and equipment required in the instructional programs, vocational-technical education programs cost more on a per-student basis as compared to the academic programs in the secondary schools and colleges.

Presently the cost of vocational-technical education in New Mexico is met largely by local and Federal funds rather than by direct State appropriation. Because trainees are becoming increasingly mobile, it is suggested that the State will have to face the responsibility of allocating funds for vocational education. Unless sufficient matching funds are available at the local and State level, vocational and technical programs in the State will fail to take optimal advantage of federal funds.

Secondary Schools Vocational Programs (2:7)

The urgent need for present and expanded vocational and technical programs at the secondary level is made clear by the following:

1. Less than 50% of the high school graduates in New Mexico enter college and less than one-half of the number entering college will graduate.

2. The dropout rate of students in the public schools of New Mexico is approximately 35%.

3. The present vocational programs in the public secondary schools serve approximately 28% of the students, whereas they should have 45% to 50% of the students enrolled.

Post-Secondary Schools Vocational and Technical Programs (2:7-8)

The post-secondary programs are operated basically in three vocational schools and four technical institutes. However; some are attached to secondary schools. Enrolled in these programs during 1967-68 were 2,243 persons, a 70% increase over 1963-64. Programs were offered in the same seven general areas as the secondary school (Vocational Agriculture, Distributive Education, Health Occupations, Home Economics, Office Education, Trades and Industries, and Technical Education) but with a heavier emphasis on health occupations and technical offerings.

The need for training at the post-secondary level is evident when the demand for trained persons is more than 18,000 annually; and presently we have an output of less than 9,000. Technicians, craftsmen, nurses, sales personnel, data processing personnel, and office personnel continue to be in short supply in the State.

All of the post-secondary offerings need to be enlarged and expanded as rapidly as funds will permit because the demand for training is large and potential placement of trainees is excellent.

Adult Vocational Programs (2:8)

The adult programs, other than Manpower programs are frequently designed for part-time students. The major objectives in the adult phase of vocational education are to meet the needs for improvement, training, or retraining of persons in the world of work. Many people need refresher courses to learn new and improved skills in their occupations.

Enrollments in adult classes have been limited on the basis of available funds rather than the demand for training. Almost 3,000 adults were enrolled in vocational programs which were offered in 1967-68.

Vocational Programs for Persons with Special Needs (2:9)

These vocational training programs are for persons who do not fit into regular vocational programs. Some persons cannot succeed in obtained and employable skills because they lack certain abilities or the situation demands special programs. Programs are offered in public schools, area schools, and institutions. These programs offer the best chance for these individuals to become productive citizens.

These programs are usually in the trade fields, home economics, and health. An attempt is made to design the programs to fit the needs of these individuals to make them self-supporting citizens. Over 400 persons were enrolled during 1967-68.

Vocational Teacher Training Program (2:10)

The need for vocational teachers far exceeds the supply annually. An attempt to increase the supply is made by teacher training programs on a regular basis and summer conferences and workshops.

As the number of vocational programs increases, it is very difficult to find a supply of teachers. Vocational teachers are required to have work experience as well as college training, which limits the number available.

Regular vocational teacher training programs are operated on some university campuses in Agriculture, Distributive Education, Home Economics, and Office Education. Summer conferences and workshops must fill the gap for Trade, Technical, and Health Occupations trainees who have been recruited from the world of work.

Traditional instructional methods and time oriented curricula is found in many vocational and technical programs. Innovative teacher training programs conducted by agencies and consultants offer new instructional approaches for the vocational and technical teacher. These types of training programs must be furthered through agencies other than traditionally-oriented universities and colleges.

Inservice institutes to familarize experienced teachers with new teaching techniques and curricular patterns are needed in vocational and technical education. Interns and teacher-aides can be trained in the instructional setting. And new techniques (e.g., micro-teaching) can be used to bring about positive behavioral changes in teachers and aides. In short, vocational and technical teacher training programs must begin to use innovative features in training teachers with greater effect.

Manpower Development Training Program (2:10)

The Manpower Development Training program is part of the total Vocational Division, although it is funded under a separate Federal act. The training is for unemployed, as well as underemployed persons, and is designed to lead to immediate employment upon completion of the program. New Mexico has a strong need for this program because of the large number of untrained, unskilled people. The Manpower Development Training Program is a cooperative program between the Vocational Division and Employment Security Commission. It is possible for other agencies and institutions to lend assistance and cooperation in furthering this training program.

Under this program approximately 3,800 persons have been or are in the process of being trained for employment. Of the number completing training, 86% have been placed.

Location of Area Vocational Schools

The following table cited from a 1968 report compiled by the State Division of Vocational Education shows the location of the States' four area vocational schools:

Name of School	Address*	Type of School 1/	Voc. Program (Ag., DE, etc)	Level of Program 2/ (S, PS, A, X)
Albuquerque Tech. Vocational Inst.	**Albuquerque, N. M. Bernalillo County Northern Congressional District**	**T**		**PS, A, X**
Northern N. M. State School	**El Rito, N. M. Rio Arriba County Northern Congressional District**	**SPS**		**S, PS, A, X**
Roswell Community College	**Roswell, N. M. Chaves County Southern Congressional District**	**JC**		**S, PS, A, X**
New Mexico Junior College	**Hobbs, New Mexico Lea County Southern Congressional District**	**JC**		**PS, A, X**

***Include county and congressional district**

1/ Code:
SS - Specialized Secondary
T - Vocational-Technical Post-Secondary
HS - Regular or Comprehensive Secondary
JC - Junior or Community College
C - University or College
SPS - Combination (Secondary, Post-Secondary)

2/ Code:
S - Secondary (9-12)
PS - Post-Secondary (1963 Act, Purpose 2)
A - Adult (Preparatory and Supplementary)
X - Persons with Special Needs

Employment Projections and Training Needs

The State Division of Vocational Education reports that vocational programs and other training sectors are producing only 52% of projected requirements for expansion and replacement needs for business in 1969. (3:2) Several severe imbalances show up on meeting needs for trained persons in such fields as Home Economics, gainful occupations, Agricultural-Business, Technical Education, and Trades and Industry. Every effort should be made to increase training programs in these areas to more adequately meet employment demands. The following table, cited from statistics included in a report by the Division of Vocational Education, gives a projection in the employment demand and supply of trained personnel in the State: (3:2a)

Occupational Area	Current 1/ Employment	Projected Requirements 2/			Training Output		
		Expansion Needs	Replacement Needs	Total	Vocational Education 3/	Other 4/ Sectors	Total
Agriculture-Production	16,000	-	400	400	341	15	356
Agriculture-Off Farm	12,000	240	600	840	24	12	36
Distribution & Marketing	52,744	1,085	1,286	2,371	1,045	150	1,195
Health	2,949	450	682	1,132	669	65	734
Home Economics Gainful	11,000	700	900	1,600	180	15	195
Office	69,400	1,688	2,082	3,770	3,289	360	3,649
Technical	5,450	925	471	1,396	324	120	444
Trade and Industrial	65,520	4,585	1,081	5,666	1,400	1,030	2,430
Total	235,063	9,673	7,502	17,175	7,272	1,767	9,039

1/ Current employment related to number employed in occupations represented by O.E. code instructional programs.
2/ Labor demand data supplied by Employment Service and from other sources
3/ Number completing vocational education programs during year at all levels
4/ Includes completions from all sources, other than vocational education programs, such as MDTA, apprenticeship, private sector, etc.

Financial Aspects

A comprehensive report was made by the Division of Vocational Education on the financial aspects of Vocational-Technical education in the state. The most relevant data are covered in the subsequent paragraphs and illustrated in table form. (3:7-8)

The Vocational Division made a concerted effort during Fiscal Year 1968 to purchase and update equipment in the secondary and post-secondary schools. State and Federal funds in the amount of over $300,000 were expended on equipment.

During the present fiscal year only a very limited amount of money will be used to purchase equipment because almost all of the State and Federal resources will be required for program operation. However, many of the local schools will utilize their reimbursement money to replace equipment since the reimbursement to them is on a program basis. The same situation is true for post secondary schools.

Several schools have remodeled or built new facilities for their vocational programs during the year, and others have plans to do so. Since this is done almost exclusively out of local funds, it is difficult to secure valid data on facility changes.

One of the major problems encountered in setting up an operation of programs for students with special needs is the large number of small high schools in New Mexico. These schools simply place the students with special needs in their regular vocational programs.

A serious deterrent to setting up special classes is the inability of local schools to meet matching requirements for funds. More unmatched Federal and State funds are necessary if the number of programs is to be increased. In spite of this problem, more than 400 students are presently served in special classes. Programs at the boys' correctional school and girls' correctional school have been quite successful.

The mobile units for isolated small rural high schools will be continued another year.

Nurse Aide programs for high school students could be increased if funds were available.

A pre-vocational pilot program is in the planning stage for this year.

The Vocational Division works very closely with Title I, ESEA, personnel in program planning. Title I has proven beneficial in purchasing equipment, some buildings, and in helping to obtain needed staff for vocational programs. Where feasible, an attempt is made through the cooperative area manpower planning system to coordinate all vocational training programs.

No special summer programs, other than those carried on in area schools, are in operation, although there is a felt need for these types of programs. Lack of funds has been the determining factor in providing such programs.

Type of Institution	No. of Schools	Estimated Allocation of Federal Vocational Funds for All Purposes*	Estimated Vocational Enrollment
Specialized High School	2	$ 23,800	200
Technical or Vocational Post-Secondary	1	248,000	3,300
Regular or Comprehensive Secondary	83	592,602	20,000
Community or Junior College	2	175,355	1,000
College or University	4	109,040	800
Secondary and Post-Secondary Combination	1	150,392	300
Private (Under Contract)	1	30,000	50
Total	93	$ 1,329,189	25,650

*Relate to amounts on OE 4256 where possible.

Recommendations

1. Expansion of mobile units in various vocational curricular areas for isolated small rural schools.

2. Expansion of Nurses Aides programs for high school students.

3. Continuation of plans to institute Vocational-Technical schools in other areas of the State.

4. A counseling and guidance program in every system to diagnose student needs, problems, and aptitudes and to prescribe programs of concentration and specialization.

5. A follow-up system to determine areas of placement and degree of success among graduates.

6. Establishment of a State education clearing house to obtain data on employment opportunities and educational information for vocational educators and teachers (e.g. new instructional media, curricular and instructional trends, and innovative programs and projects in Vocational Education).

7. Preservice and inservice training programs are highly recommended for secondary and part-time instructors of vocational and apprentice programs.

8. It is proposed that Teacher training programs for Vocational and Technical teachers and Teacher-Aides should include the following innovative features:

    a. Familiarization and application of instructional modes as related to different instructional conditions (e.g., small groups, large groups, and independent study). This implies training in the use of multi-media and instructional techniques applicable in large group settings, small group settings, and via individualized instruction.

    b. Training in the formulation and application of behavioral objectives based on performance criteria as opposed to time criteria.

    c. Training in the organization and/or relationship of teachers and teacher-aides in cooperative teaching teams. Special consideration will be given to role differentiation, expectations and responsibilities.

    d. Cultural-sensitivity training for teachers and teacher-aides of Spanish-surnamed students and Indian students.

   e. Identification and application of psychological learning variables in the teacher-training program.

   f. Exposure to a micro-teaching training program with particular attention to learning variables associated with the Vocational Education student.

9. An intership program is highly recommended to provide actual instructional exposure to prospective vocational education teachers and teacher-aides.

Footnote References

1. Annual Descriptive Report of Program Activities for the Trade, Industrial, and Technical Divisions - Fiscal Year 1967-68 Division of Vocational Education, State Department of Education, Sante Fe, New Mexico, 1968, pp. 3.

2. Report - State Department of Education - Vocational Education Division - Code 1.925.X. State Department of Education, Sante Fe, New Mexico, 1968, pp. 14.

3. Projected Program Activities in Vocational Education. State Department of Education, Sante Fe, New Mexico, July 15, 1968, pp. 16.

INDIAN EDUCATION

Introduction

This paper focuses primarily on Indian education and recommendations to alleviate the deficiencies of the Anglo-American educational system with respect to the needs of the Indian. Because many of these recommendations are equally applicable to the Spanish-speaking child in the Anglo-American educational setting, this ethnic group is also included in particular sections of the paper.

Population and School Enrollment

A publication by the Division of Government Research, contributed by Anne M. Smith, reveals that Indian population is increasing at about five percent a year, approximately twice that of the general population. (1:3) New Mexico's Indian population has increased from 34,510 in 1940 to 66,925 in 1967. Needless to say, this increased population has important implications for Indian education and job placement.

A very complete account of school enrollment and attendance was compiled in a 1966-67 annual report by the Division of Indian Education. Between 1952 and 1967, a dramatic increase in enrollment, A. D. A., and number of graduates is indicated. The actual statistics are given below: (2:24)

The School Enrollment and Attendance of Indian Children

Year	Enrollment	A.D.A.	High School Enrollment	No. of Graduates	Percentage
1952-53	1,347	1186			
1953-54	1,746	1491			
1954-55	2,141	1837			
1955-56	2,260	1923			
1956-57	3,669	3195			
1957-58	4,407	3977	860	105	12.2
1958-59	5,264	4673	733	122	16.6
1959-60	6,240	5738	930	150	16.1
1960-61	7,148	6687	1,035	161	15.6
1961-62	7,380	6771	1,249	166	13.3
1962-63	8,166	7378	1,567	217	13.8
1963-64	8,706	7942	1,709	237	13.9
1964-65	9,154	8330	1,846	311	16.8
1965-66	9,774	8849	2,017	352	17.4
1966-67	10,687	9704	2,198	346	15.7

The need in Indian education is not primarily one of money, it is simply that of developing and implementing an educational system that recognizes his cultural background and identifies the cultural variables that will facilitate the learning scheme. This suggests a cultural awareness training program for teachers of Indians and other ethnic groups (e.g., Spanish-speaking children).

Research shows that verbal scores for Indians and Spanish-speaking children lag behind Anglo-American children. This is not surprising - it should be a predictable factor. Since the Indian and Spanish-speaking child must undergo training in an English-speaking school system, English instruction must begin earlier than for the Anglo-American child. This proposes a head-start program and a kindergarten system. Thus, rather than beginning the first grade one year after the Anglo-American child, an earlier educational exposure would have prepared the Indian and Spanish-speaking child for first grade exposure at the same age level as the Anglo-American child.

The language program for Indian and Spanish-speaking children must take a new approach as compared to the traditional language instruction practiced in the conventional Anglo-American educational setting. Teaching English as a second language is now recommended as a positive approach, especially for children with a deficiency in English. At the present time, few teachers in New Mexico are adequately prepared to teach English by the "TESL" method. The Miami Linguistic reader is designed primarily for Spanish-speaking children, but it is also applicable and recommended for use with Indian children. (1:35) Whatever materials are selected, it is highly suggested that training programs be instituted to train experienced teachers and new teachers who are working or will place in schools composed of a bicultural or multicultural population. Schools of Education in state-supported institutions of higher learning should include courses in linguistics, TESL and anthropology of education across cultures, as part of the curriculum for prospective elementary teachers. (1:42) The Southwestern Cooperative Educational Laboratory in Albuquerque has specifically developed and tested this type of program. It is now available for implementation.

Through the years the Division of Indian Education has advocated and encouraged kindergartens, summer schools, special teachers in unusual circumstances, reasonable teacher-pupil ratios, adequate and desirable materials and supplies, and well-planned pilot programs designed to facilitate and reinforce language instruction. (2:24) The Division must be appraised for its efforts and encouraged to continue seeking ways to make more of these types of programs operational. It is also suggested that the New Mexico public schools search for ways to implement these types of programs to benefit the Spanish speaking children in their areas.

The Indian Pupil Dropout

The Division of Indian Education has proposed a longitudinal study on the secondary Indian pupil dropout. Similar studies are needed for the Spanish-speaking youngster in various geographical regions of the nation. Causes of dropout must be analyzed and measures taken to increase the retention of the Indian and Spanish-speaking children through high school. The most relevant features of the Indian pupil dropout study proposed by the Division of Indian Education are given below: (2-28)

1. To identify and describe certain characteristics, influences, and causal factors relating to Indian pupil school dropouts.

2. To determine the extent of Indian pupil dropouts in the public schools of New Mexico and, hopefully, to include other schools that are involved in the education of Indian pupils.

3. To encourage the early collection of pertinent information on students for the purpose of identifying the potential dropout.

4. To determine the extent and nature of the dropout problem of Indian pupils in the state of New Mexico

5. To bring the dropout problem to the attention of educators in schools enrolling Indian pupils throughout the state of New Mexico.

6. To seek solutions to the Indian pupil dropout problem after analyzing all available factors that contribute to dropouts.

Anne Smith, in her study of Indian Education in New Mexico, (1:13) shows that during the period 1958 to January, 1962, there were 416 Indian students representing 89 tribes in 27 southwestern colleges and universities. During this same period 237 dropouts were identified. Financial reasons were given as the reason for 48 percent and inadequate preparation for 38 percent. Further, only 26 out of the 402 in school had a grade average of 2.75 or higher and 35 percent had less than a C (2.00) average. Thirty-two percent of the Indians in school had been on academic probation as compared to 2 percent of non-Indians. (1:13)

The needs and causes of the Indian dropout deserves further study so that programs and recommendations can be made to facilitate his learning conditions at every level of education. The Division of Indian Education points out that a survey of college students in State institutions of higher learning is presently underway. The most significant features of this undertaking are listed below:

1. To identify and describe certain characteristics and causal factors relating to the success or non-success of Indian college students.

2. To determine the age, sex, and tribal affiliation of Indian college students and relate these to college GPA etc.

3. To determine mean scores in factors measured by the American College Tests and the School and College Ability Tests, and relate these to the college GPA;

4. To determine the mean high school grade point average and college grade point average;

5. To determine the relationship between the high school GPA and college GPA for Indian students;

6. To determine the relationship between English and Math percentile scores on the ACT and SCAT and the college grade received in these courses by the Indian college students;

7. To determine the college major most often chosen by Indian students and why it is chosen;

8. To determine whether the size and type of school has any relationship to college GPA for Indian students;

9. To determine the extent of the influence on the college GPA of Indian students by the number of hours carried the first year.

Financial Aspects

The total contributions of the federal government for Indian education in the New Mexico public schools were approximately $3,182,432 for the year 1966. This total was arrived as follows: (1:25-26)

16% of PL874 funds for federally-connected pupils . . .	$1,317,356
Johnson-O'Malley funds	1,386,549
BIA contracts for peripheral dormitory pupils (BIA pupils times N. M. average per pupil cost) . . .	478,527

This was, of course, in addition to local, county, and state sources for each pupil. All school districts welcome the additional funds; however, the distressing picture is that in spite of the money available, the schools have not yet found the types of educational programs that will meet the special needs of the Indian children.

Recommendations

Eight significant areas of need to which educational programs and projects can be directed are proposed by the Division of Indian Education. Although the following focuses on Indian education, its applicability to schools in which Spanish-speaking youngsters are enrolled is quite apparent:

1. Early childhood education should be provided for every child. These programs should include closer home-school cooperation and relate to adult education programs.

2. An expansion of summer school programs would be highly desirable.

3. Training in personal finance and basic economics should be an important part of curriculum offerings.

4. Vocational-technical courses should be increased and students should be well informed regarding the requirements and opportunities in technical fields.

5. The in-service training of teachers should be a continuous part of the over-all program of the school.

6. Teachers should be relieved of routine details and duties in order that they may concentrate on instruction.

7. Coordination of activities of the numerous and varied educational agencies and programs would result in more effective use of personnel and funds.

8. A greater number of qualified Indian citizens should be serving on local boards of education (five districts in New Mexico presently have Indian board members).

Anne Smith (1:29) suggests that teachers must be aware that educating an Indian child takes more effort than educating the non-Indian. It requires better and specially trained teachers, more time, additional rooms, more equipment and materials, and greater individual attention. Smith recommends eight special problem areas for consideration: (1-9)

1. Special teacher training centers will have to be developed.

2. Teachers skilled in teaching English as a second language must be obtained and trained.

3. Special text books must be developed based on Indian life including his history, heritage, society, family relationships, and community behavior patterns.

4. Smaller student-teacher ratios must be maintained.

5. Special tutoring programs must be established.

6. Special counseling programs and problem solving techniques must be devised.

7. Cultural empathy must be developed by all Indian-education personnel.

8. Indian parents must have representation on their school boards and must develop a sense of being able to control their own destiny.

An instructional program which provides oral language instruction to lower elementary children of various cultures has been made operational by one of the regional laboratories in the Southwest. Specifically, the Southwestern Cooperative Educational Laboratory in Albuquerque has successfully developed and tested an oral language program, coupled with materials and techniques relevant to the Indian and Spanish-American cultures. A teacher training institute conducted by the SWCEL is necessary to familiarize the teachers with the lessons and instructional techniques prior to implementation of the program. This program is highly recommended for application in educational settings in which Indian and Spanish speaking children are enrolled.

FOOTNOTE REFERENCES

1. Anne M. Smith, Indian Education in New Mexico. Division of Government Research, Institute for Social Research and Development, The University of New Mexico; July, 1968. Pp. 52.

2. Annual Report. The Division of Indian Education of the New Mexico State Department of Public Instruction to the Bureau of Indian Affairs (1966-67), pp. 39.

NEW MEXICO'S INSTITUTIONS OF HIGHER LEARNING AND TEACHER TRAINING

Seven State institutions of higher learning serve the New Mexico population. All are ideally located to serve different geographical areas in the State. The University of New Mexico is located in the central part of the State, New Mexico Highlands University in the North, New Mexico State University in the South, Eastern New Mexico University in the East, and New Mexico Western in the West. The University of New Mexico and New Mexico State University provide a greater number of curricular offerings as compared to the other institutions; however, the other three institutions are considered excellent teacher training centersand provide degree programs in fields which are directly supportive to secondary and elementary curricular programs. Two other institutions offer specialized degree programs: The New Mexico Institute of Mining and Technology in Socorro, carries specialized engineering offerings and the New Mexico Military Institute in Roswell, specializes in military science.

Yearly enrollment continues to rise among the aforementioned institutions. The following table shows enrollment per grade division between 1963 and 1968: (1:5)

Main Campus Enrollment

Institution	PERIOD	UNIVERSITY OF NEW MEXICO	NEW MEXICO STATE UNIVERSITY	NEW MEXICO HIGHLANDS UNIVERSITY	WESTERN NEW MEXICO UNIVERSITY	EASTERN NEW MEXICO UNIVERSITY	NEW MEXICO INSTITUTE OF MINING AND TECHNOLOGY	NEW MEXICO MILITARY INSTITUTE *	TOTAL COLLEGE LEVEL INSTITUTIONS
1963 Total	Lower Div.	4,483	2,182	669	554	1,395	202	184 (474)	9,769
	Upper Div.	1,975	1,319	325	320	628	64	-0-	4,631
	Graduate	1,491	669	198	164	228	40	-0-	2,790
	Irreg.Class	1,105	73	86	108	114	35	-0-	1,521
	Total	9,054	4,243	1,278	1,146	2,365	341	284 (474)	18,711
1964 Total	Lower Div.	5,025	2,483	739	539	1,606	244	377 (556)	11,013
	Upper Div.	2,019	1,498	329	346	730	86	-0-	5,008
	Graduate	1,711	769	205	105	302	48	-0-	3,140
	Irreg.Class	1,459	74	49	73	112	34	-0-	1,801
	Total	10,214	4,824	1,322	1,063	2,750	412	377 (556)	20,962
1965 Total	Lower Div.	6,104	3,166	942	680	2,056	277	400 (551)	13,625
	Upper Div.	2,404	1,685	394	339	807	108	-0-	5,737
	Graduate	1,901	804	105	89	336	44	-0-	3,279
	Irreg.Class	1,354	67	27	103	115	48	-0-	1,714
	Total	11,763	5,722	1,468	1,211	3,314	477	400 (551)	24,355
1966 Total	Lower Div.	6,474	3,184	1,118	742	2,133	290	429 (525)	14,370
	Upper Div.	2,812	1,851	420	367	786	148	-0-	6,384
	Graduate	2,104	929	155	67	398	56	-0-	3,709
	Irreg.Class	1,113	108	25	87	-0-	47	-0-	1,380
	Total	12,503	6,072	1,718	1,263	3,317	541	429 (525)	25,843
1967 Total	Lower Div.	6,357	3,524	1,218	687	2,120	289	378 (566)	14,573
	Upper Div.	3,364	2,070	543	389	1,012	169	-0-	7,547
	Graduate	2,317	1,075	195	90	429	77	-0-	4,183
	Irreg.Class	1,348	123	37	67	-0-	51	-0-	1,626
	Total	13,386	6,792	1,993	1,233	3,561	586	378 (566)	27,929
1968 Bud	Lower Div.	6,700	3,725	1,323	756	2,220	370	376 (574)	15,470
	Upper Div.	3,800	2,300	635	397	1,140	175	-0-	8,447
	Graduate	2,573	1,200	175	90	460	80	-0-	4,578
	Irreg.Class	1,350	150	25	68	-0-	50	-0-	1,643
	Total	14,423	7,375	2,158	1,311	3,820	675	376 (574)	30,138

The Number of degrees granted by the State universities in comparison to freshmen enrollment deserves attention. An analysis of the statistics illustrated in the following table shows fluctuation in degrees granted between 1961 and 1968.

Areas of Specialization per institution	Degree	61 62	62 63	63 64	64 65	65 66	66 67	67 68
Agriculture								
NMSU	BA/BS	53	60	58	61	58	71	99
	MA/MS	6	4	13	13	29	26	39
ENMU	BA/BS	1	2	--	2	3	1	6
	MA/MS	--	--	--	--	--	--	--
Arts (Arts & Crafts)								
UNM	BA/BS	23	28	42	40	45	41½	39½
	MA/MS	5	10	7	6	5	14	13
NMSU	BA/BS	--	--	--	--	2	2	2
	MA/MS	5	3	2	4	6	4	6
NMHU	BA/BS	1	1	--	3	4	9	3½
	MA/MS	--	6	6	4	5	6	3½
NMWU	BA/BS	2	5	1	1	5	6	6
	MA/MS	1	2	1	1	1	--	1
ENMU	BA/BS	2	5	1	1	5	6	6
	MA/MS	2	1	--	1	--	--	--
Biology (includes Botany & Zoology)								
UNM	BA/BS	34	26	41	41½	46	58	64
	MA/MS	12	6	11	6	11	14	18
NMSU	BA/BS	5	16	10	13	15	12	19
	MA/MS	3	5	5	7	13	6	11
NMHU	BA/BS	9	10	15	8	13½	16	23½
	MA/MS	4	6	8	2	4	9	7
NMWU	BA/BS	3	3½	2	3½	3½	1	2
	MA/MS	--	--	--	--	--	--	--
ENMU	BA/BS	9	8	10	11	9	14	15
	MA/MS	--	--	--	--	--	--	--
NMIMT	BA/BS	--	--	--	--	--	3	5
	MA/MS	--	--	--	--	--	--	--

Areas of Specialization per institution	Degree	61 62	62 63	63 64	64 65	65 66	66 67	67 68
Business Administration								
UNM	BA/BS	51	55	67	64½	73	104	91
	MA/MS	5	4	9	9	8	28	30
NMSU	BA/BS	33	29	49	59	58	50	64
	MA/MS	--	--	--	--	--	--	--
NMHU	BA/BS	12	5	8	7	28	11½	26½
	MA/MS	1	1	1	3	7	8	20
NMWU	BA/BS	3	3½	2	3½	3½	1	2
	MA/MS	1	2	--	1	1	1	7
ENMU	BA/BS	38	57	51	52	39	67	80
	MA/MS	2	4	8	9	8	12	18
Chemistry								
UNM	BA/BS	8	11	11	20	12	16	26
	MA/MS	1	2	6	1	7	3	9
NMSU	BA/BS	13	4	5	5	12	9	9
	MA/MS	--	4	3	4	3	5	2
NMHU	BA/BS	4	2	1	4	1	1	2½
	MA/MS	4	6	7	8	5	5	4
NMWU	BA/BS	2	--	3	--	--	2	2
	MA/MS	--	--	--	--	--	--	--
ENMU	BA/BS	4	3	5	13	12	3	3
	MA/MS	1	--	1	--	2	--	3
NMIMT	BA/BS	2	4	6	7	6	2	5
	MA/MS	1	--	1	1	3	1	2
Economics								
UNM	BA/BS	12	12	9	18	11	15½	17½
	MA/MS	2	--	1	3	1	6	7
NMSU	BA/BS	--	--	1	1	6	2	3
	MA/MS	--	--	--	--	--	2	5
NMHU	BA/BS	--	--	1	1	--	--	--
	MA/MS	--	--	--	--	--	--	2
ENMU	BA/BS	--	2	3	2	3	3	3
	MA/MS	1	1	--	--	--	--	--
NMWU	BA/BS	--	--	½	½	4½	3½	3½
	MA/MS	--	--	--	--	--	--	--

Areas of Specialization Per Institution	Degree	61 62	62 63	63 64	64 65	65 66	66 67	67 68
Education								
UNM	BA/BS	54	102	88	99½	111	129½	176
	MA/MS	88	110	109	130	136	155	181
NMSU	BA/BS	40	71	78	83	103	109	105
	MA/MS	14	19	20	25	15	58	73
NMHU	BA/BS	35	23	36	24	31½	24½	41½
	MA/MS	36	31	38	30	28	29½	24
NMWU	BA/BS	55	23	35½	35	44	29½	37
	MA/MS	31	27	41	49	27	36	35
ENMU	BA/BS	65	70	106	106	110	113	128
	MA/MS	42	44	73	84	105	87	103
English								
UNM	BA/BS	46	45	64½	71	75½	73	86
	MA/MS	5	6	7	17	21	23	17
NMSU	BA/BS	5	8	13	7	8	12	9
	MA/MS	1	3	1	3	1	3	5
NMHU	BA/BS	--	8	4	6	9½	7½	7
	MA/MS	4	5	5	4	5½	3	4
NMWU	BA/BS	2	7½	8½	11	14½	6½	5½
	MA/MS	2	--	4	5	4	--	2
ENMU	BA/BS	13	10	20	18	20	25	28
	MA/MS	1	4	5	2	7	10	22
French								
UNM	BA/BS	4	3	8½	2	9	8½	11½
	MA/MS	--	--	--	--	--	--	--
ENMU	BA/BS	--	--	--	--	1	3	1
	MA/MS	--	--	--	--	--	--	--
Geography								
UNM	BA/BS	1	2	--	2	3	3	7
	MA/MS	--	--	--	--	--	--	--
NMSU	BA/BS	2	--	--	--	--	5	4
	MA/MS	--	--	--	--	--	--	--
ENMU	BA/BS	2	4	1	--	3	6	5

Areas of Specialization per Institution	Degree	61 62	62 63	63 64	64 65	65 66	66 67	67 68
Government								
UNM	BA/BS	16	13½	16	21	25½	38	42½
	MA/MS	--	2	4	3	2	3	3
NMSU	BA/BS	1	4	2	1	6	12	11
	MA/MS	--	--	--	--	--	--	--
NMHU	BA/BS	3	7	6	7	6½	3½	6
	MA/MS	--	--	--	--	--	--	1
ENMU	BA/BS	9	3	3	10	11	14	11
	MA/MS	2	2	--	--	2	3	5
History								
UNM	BA/BS	37	34	40½	57½	56½	62	103
	MA/MS	12	7	10	13	16	11	20
NMSU	BA/BS	3	5	5	4	7	5	9
	MA/MS	--	1	1	1	1	3	2
NMHU	BA/BS	2	7	4	8	10½	--	15½
	MA/MS	4	--	1	3	7	--	2
NMWU	BA/BS	3	6	7	2½	11½	9½	3½
	MA/MS	--	--	--	--	--	--	--
ENMU	BA/BS	7	12	14	11	14	4	14
	MA/MS	5	4	4	9	6	10	4
Home Economics								
UNM	BA/BS	9	7	6	19	19	19	24
	MA/MS	--	--	--	--	--	--	--
NMSU	BA/BS	8	12	13	27	18	20	25
	MA/MS	--	--	--	--	1	--	4
NMHU	BA/BS	1	--	5	4	5	--	2
	MA/MS	--	--	--	--	--	--	--
NMWU	BA/BS	1	2	4	4	3½	6	4
	MA/MS	--	--	--	--	--	--	--
ENMU	BA/BS	10	7	7	5	6	5	20
	MA/MS	--	--	--	--	--	--	--

Areas of Specialization per institution	Degree	61 62	62 63	63 64	64 65	65 66	66 67	67 68
Industrial Arts								
UNM	BA/BS	--	--	--	--	--	--	--
	MA/MS	--	--	--	--	--	--	--
NMHU	BA/BS	4	--	--	--	--	--	--
	MA/MS	2	--	--	--	--	--	--
NMWU	BA/BS	2	--	--	--	--	--	--
	MA/MS	--	--	--	--	--	--	--
ENMU	BA/BS	9	--	--	--	--	--	--
	MA/MS	--	--	--	--	--	--	--
Inter-American Affairs								
UNM	BA/BS	12	--	--	--	--	--	--
	MA/MS	--	--	--	--	--	--	--
Journalism								
UNM	BA/BS	7	7½	8½	4	13	11	15
	MA/MS	--	--	--	--	--	--	--
NMSU	BA/BS	2	1	3	2	7	4	17
	MA/MS	--	--	--	--	--	--	--
NMHU	BA/BS	1	--	2	1	--	--	4½
	MA/MS	--	--	--	--	--	--	--
ENMU	BA/BS	2	3	--	2	1	1	4
	MA/MS	--	--	--	--	--	--	--
Mathematics								
UNM	BA/BS	21	25	31	30½	33	29	32
	MA/MS	3	4	5	8	11	3	22
NMSU	BA/BS	15	16	19	18	22	23	21
	MA/MS	10	14	7	13	8	8	17
NMHU	BA/BS	3	3	4	4	1	4	3
	MA/MS	2	2	3	3	4	--	1
NMWU	BA/BS	--	3½	3	5½	3½	11	6
	MA/MS	--	--	--	--	--	--	--
ENMU	BA/BS	16	21	13	12	14	19	13
	MA/MS	2	4	2	5	8	6	8
NMIMT	BA/BA	2	4	7	5	8	11	16
	MA/MS	--	--	1	--	--	--	3

Areas of Specialization per institution	Degree	61 62	62 63	63 64	64 65	65 66	66 67	67 68
Music								
UNM	BA/BS	6	12	7	16	6	2	12
	MA/MS	3	3	1	5	6	6	4
NMSU	BA/BS	2	--	--	2	4	2	6
	MA/MS	--	--	--	--	--	--	--
NMHU	BA/BS	3	5	1	6	2½	3	7
	MA/MS	--	1	1	4	5	1	4
NMWU	BA/BS	1	3	--	--	--	--	--
	MA/MS	--	--	--	--	--	--	--
ENMU	BA/BS	1	1	--	1	--	1	--
	MA/MS	2	--	--	1	1	2	3
Nursing								
UNM	BA/BS	21	29	22	23	25	22	21
	MA/MS	--	--	--	--	--	--	--
Pharmacy								
UNM	BA/BS	21	22	19	8	24	20	32
	MA/MS	--	--	--	--	--	--	--
Physical Education (Men)								
UNM	BA/BS	23	24	24	21½	21	25	35
	MA/MS	6	10	7	7	9	15	12
NMSU	BA/BS	4	6	10	2	--	3	5
	MA/MS	--	--	--	--	--	--	--
NMHU	BA/BS	6	5	8	5	9½	6	6
	MA/MS	4	3	4	2	2	--	3
NMWU	BA/BS	--	3	10½	13½	10½	9	15½
	MA/MS	--	--	--	--	--	--	--
ENMU	BA/BS	12	13	9	10	7	18	19
	MA/MS	4	3	1	5	7	3	4

Areas of Specialization per institution	Degree	61 62	62 63	63 64	64 65	65 66	66 67	67 68
Physical Education (Women)								
UNM	BA/BS	4	4	10	16	9	18	15
	MA/MS	2	1	3	--	3	2	6
NMSU	BA/BS	5	3	--	--	--	1	7
	MA/MS	--	--	--	--	--	--	--
NMHU	BA/BS	2	3	--	2	1½	2½	1
	MA/MS	--	--	--	--	1½	--	--
NMWU	BA/BS	--	½	4½	1	5½	2	2½
	MA/MS	--	--	--	--	--	--	--
ENMU	BA/BS	3	2	3	--	6	11	11
	MA/MS	1	2	2	--	1	--	2
Physics								
UNM	BA/BS	3	2½	2½	7	8	8	10½
	MA/MS	20	13	10	6	8	10	7
NMSU	BA/BS	10	9	10	11	7	8	11
	MA/MS	4	9	5	6	4	7	9
NMHU	BA/BS	2	3	2	--	--	½	3½
	MA/MS	1	1	--	7	1	--	1
ENMU	BA/BS	--	1	1	1	1	4	4
	MA/MS	--	--	--	--	--	--	--
NMIMT	BA/BS	5	5	3	3	5	9	10
	MA/MS	--	--	4	3	1	1	4
Psychology								
UNM	BA/BS	13	16½	36	34½	44½	39	39
	MA/MS	5	3	1	6	4	9	8
NMSU	BA/BS	5	5	12	9	13	20	9
	MA/MS	2	1	4	1	--	10	4
NMHU	BA/BS	6	6	2	4	3	3	5
	MA/MS	1	--	3	4	12	6	9
ENMU	BA/BS	5	14	9	13	21	21	18
	MA/MS	6	4	8	7	6	10	16

Areas of Specialization per institution	Degree	61 62	62 63	63 64	64 65	65 66	66 67	67 68
Science (unspecified)								
UNM	BA/BS	7	5	1	½	3	1	--
	MA/MS	--	--	--	--	--	--	--
NMSU	BA/BS	--	--	--	--	2	--	--
	MA/MS	--	--	--	--	--	--	--
NMHU	BA/BS	--	--	--	--	--	--	--
	MA/MS	43	36	37	--	--	15	--
NMWU	BA/BS	5	14½	10	9½	10	15	15
	MA/MS	--	--	--	--	--	--	--
ENMU	BA/BS	--	2	--	3	2	6	--
	MA/MS	--	4	7	--	--	--	--
Sociology								
UNM	BA/BS	2	12½	6	10½	14	18	20
	MA/MS	1	--	--	--	1	3	1
NMSU	BA/BS	2	6	3	4	6	4	8
	MA/MS	--	--	--	--	1	1	--
NMHU	BA/BS	4	1	2	4	1½	2	1½
	MA/MS	--	--	--	1	--	1	--
ENMU	BA/BS	3	2	1	2	6	6	10
	MA/MS	--	--	--	--	--	--	--
Spanish								
UNM	BA/BS	6	12	28	22½	26½	29½	25½
	MA/MS	4	2	5	9	12	10	16
NMSU	BA/BS	3	3	2	1	--	--	8
	MA/MS	--	--	--	--	--	--	--
NMHU	BA/BS	5	--	--	7	3½	2½	5
	MA/MS	1	--	3	2	2	3½	1
NMWU	BA/BS	--	2	3	5	4½	5	7½
	MA/MS	--	--	--	--	--	--	--
ENMU	BA/BS	2	7	2	5	3	2	3
	MA/MS	--	--	--	--	--	--	--

Area of Specialization per institution	Degree	61 62	62 63	63 64	64 65	65 66	66 67	67 68
Speech and Dramatics								
UNM	BA/BS	15	15½	11	16½	14½	24½	30
	MA/MS	2	3	2	4	7	11	12
NMSU	BA/BS	--	--	2	2	2	2	5
	MA/MS	--	--	--	--	--	--	--
NMHU	BA/BS	2	4	3	2	2½	4	--
	MA/MS	--	--	--	--	--	--	--
ENMU	BA/BS	4	8	3	3	7	7	14
	MA/MS	2	--	1	2	1	3	3
Arts Communication								
UNM	BA/BS	2	3	6	5	7½	12½	14
	MA/MS	--	--	--	--	--	--	--
English Philosophy								
UNM	BA/BS	2	5	1	3	2	5	11
	MA/MS	--	--	--	--	--	--	--
Latin American Studies								
UNM	BA/BS	--	--	13	16	12	10	19
	MA/MS	2	--	3	3	1	3	4
Industrial Technology								
NMWU	BA/BS	10	8	14½	3	4	--	4
	MA/MS	--	--	--	--	--	--	--
ENMU	BA/BS	--	3	1	1	1	1	--
	MA/MS	--	--	--	--	--	--	--
Basic Sciences								
NMIMT	BA/BS	--	2	--	3	5	6	3
	MA/MS	--	--	--	--	--	--	--

The greatest number of degrees granted is in the field of Education. Yet in the areas of greatest need (e.g., physics and chemistry), the number of B.S degrees granted remains critically low. These deficiencies are directly reflected in teacher shortages among the secondary and elementary schools in the State. The Division of Teacher Certification has attempted to resolve this problem by issuing substandard certificates to teachers in critical subject-matter areas. For example, some physics teachers are teaching with 8 semester hours of physics rather than the required 18 semester hours. (3) It is very likely that these teachers cannot provide the quality instruction that a fully qualified teacher is able to give.

Moreover, the number of offerings in a curricular area such as physics, chemistry, mathematics, or foreign languages will be limited with respect to teacher availability. High school graduates from schools with limited curricula, especially apparent in the State's rural poor districts, enter university work with serious deficiencies. Academic failure and dropouts are inevitable unless the State universities institute programs that will help students with critical academic deficiencies.

Secondary and university counseling programs must identify students with talents in subject-matter areas where teacher shortages exist. Universities, colleges, secondary schools, local, state and regional agencies should encourage high school graduates to undertake university programs in these fields by providing scholarships and grants.

School districts must give serious consideration to their salary structures, especially with reference to areas in which teacher shortages continue to exist. The low supply of university science graduates, coupled with the fact that industrial salaries are more attractive than teacher's salaries, will perpetuate the teacher shortage problem. Moreover, the stabilization of salaries among the districts will continue to effect higher turnover rates as compared to 10 years ago. Teacher salaries in other states have matched or surpassed New Mexico's. University graduates from the neighboring states are no longer attracted by our State's salaries. In fact, New Mexico is losing teachers to states that offer higher salaries and better increments.

It is folly to assume that a university graduate is a fully-trained teacher. Too often new teachers are given the most difficult teaching assignments (without preservice training to meet unique situations) because the older teachers have been promoted to work with the better groups of students--the academically accelerated groups of 10 or 12. Yet it is conceivable that greater experience and competency is required in groups with unique needs and problems. We actually promote teacher frustration and failure by an antiquated method of teacher assignment.

It is also an erroneous assumption that teachers need no further training after graduation or after two or more years of experience. Even the most experienced teacher needs to be exposed to new methods and curricular trends. Although the State universities can extend services in this respect, other agencies (e.g., the Southwestern Cooperative Educational Laboratory in Albuquerque) that are exploring, developing, and implementing innovating methods, media, and new curricula can provide exciting and worthwhile preservice and inservice institutes to new and experienced teachers.

Teachers need training in small group processes, in using multi-media and techniques in large groups, and in developing and applying individual instructional packages based on performance criteria, etc. Where computer assisted instruction or program instruction can contribute to individual pacing and accelerated learning, it should be given consideration. Further, the application of micro-teaching can do wonders in bringing about a favorable change in teaching behavior. These and other innovations need to be explored by teachers and administrators in New Mexico.

The ultimate objective is to promote greater learning among the student population--to decrease the dropout rate and to increase the number of students entering and completing college and university programs in our State. Through preservice and inservice institutes, teachers and administrators can learn to apply new and better ways to achieve this goal.

Footnote References

1. Analysis of Instutional Operating Budgets (1968-69). Board of Educational Finance, Sante Fe, New Mexico, 1968, pp. 46.

2. Statistical Papers Showing Number of Bachelor's and Master's Degrees Granted in Each Subject by Each Institution. Board of Educational Finance, Sante Fe, New Mexico, 1968, pp. 12.

3. Interview with LaMar Lamb, Director, Division of Teacher Certification, State Department of Education, Sante Fe, New Mexico, November 18, 1968.

Appendix

An Innovative Critical Analysis of the New Mexico Educational System

by Dr. Atilano A. Valencia

Traditionalism looms over the New Mexico educational system from the elementary schools through the college and university level. Instruction is generally extended in conventional groups of 20-30, except in the small schools where low enrollment results in smaller classes. Irrespective of size, teacher-directed instruction (via lectures and directions) is quite evident among the New Mexico schools.

There are isolated areas in which some innovations are being tried--these should be applauded and encouraged. A few schools are attempting the non-graded curriculum, team-teaching or cooperative teaching, and development of learning materials based on behavioral objectives.

The success of a non-graded curriculum is dependent on the effectiveness of the individualization of instruction. Where teachers comprehend their roles and the role of the pupil, use a variety of learning materials and media together with multi-activities, the non-graded curriculum can reach new heights in the learning scheme.

A new approach to team teaching is to conceptualize teacher differentiated roles in relationship to various types of instructional modes or activities. Thus, some teachers, with charismatic appeal, will do wonders with children in a large group setting. Other teachers work most effectively in small discussion groups or task-oriented small groups, while other teachers can apply excellent diagnostic and prescriptive instructional treatment on an individual basis. The teacher who can perform equally well in all these modes is truly exceptional.

Flexibility in scheduling takes more meaning when it is coupled with instructional strategy. Various degrees of flexibility can be planned, dependent on how much structured time is desired to reach particular course objectives via the large group, small group, or independent study and individualized learning. Some innovative schools in the nation begin with a certain percentage of structure time for each of several instructional modes where various types of activities and media are selected as relevant and appropriate for instruction in a particular setting. Structural time can then be decreased as needed, and directed or non-directed independent study is applied. Other schools begin with a very minimal structured time block and expend time as needed. The difficulty with the latter approach is the probability of conflicting time with other curriculum areas. A suggested structured-unstructured time block would be as follows:

60% Structured (Large group, Small Group, Lab Instruction)
40% Unstructured (Independent study in Learning Areas)

Small group instruction is being carried on in some schools. But in too many cases, small group work is teacher-directed. In essence, it would be just as well for the teacher to conduct lecturing, demonstrations, and illustrating in a conventional group size of 20-30. Where the small group is task-oriented, creativity is stifled by an intervening teacher. Greater interaction, pupil involvement, and creativity is generated apart from an authoritative figure. The teacher can play a directive role in the large group setting, and rightly so, for pupil interaction in the large group will not readily occur. When teachers attempt questions and answers in the large setting, the reinforcement of the few "eager beavers" whose hands frequently pop up to answer directed questions is perpetuated, while the inhibited pupil with all the answers is shut off from positive reinforcement. Thus reinforcement for all pupils can be most effectively applied in the small groups and through individualized instruction rather than in the large group setting.

It is possible for teachers to become participating members in a small group and apply non-verbal techniques to encourage pupil participation. It follows that an emergent type or a participatory type of leadership role can be generated through small group interaction.

Acquaintanceship with pupil needs, problems, and expectations is increased through an individualized learning program. This does not imply merely a tutoring approach, but a diagnostic and prescriptive scheme followed by independent study.

The problem of overloaded classrooms and teacher shortages will persist in New Mexico unless uranium and oil deposits are discovered in every poor community. The salary structure, while fair, is not sufficiently high to attract well-trained teachers or retain the healthy, aggressive, and innovative type. A new type of salary schedule based on role differentiation and responsibilities is proposed. This is not to be confused with merit pay. Age and seniority are outmoded factors in salary differentiation, for they can perpetuate worn-out instructional practices and curricula. Yet, grandfather clauses may be incorporated in the transitional stage to remove the stigma of the proposed innovation. More importantly, a differentiated staff type of salary structure will permit promotion of younger teachers to roles and areas of responsibilities based on a new criteria (performance, competencies, educational preparation, innovativeness, etc.).

The foregoing can attract well-qualified young teachers and reduce the turnover rate. And where the absence of funds limits the number of qualified teachers, paraprofessionals or teacher aides may be trained to undertake areas of responsibility in which a high level of professional competency is not required. These aides will take the responsibility of cranking the ditto machines, role taking, supervising learning centers, setting up visual and auditory equipment, checking and distributing learning materials, and assisting the credentialed teachers in individualized instruction at resource centers, materials centers, library, open labs and shops.

The hiring of teacher aides will achieve the following:

1. It releases professional teacher time for involvement in a variety of activities with pupils (e.g., small group instruction and individualized instruction via independent study);

2. It identifies and recognizes the status role of credentialed teachers as that of a professional person;

3. It permits time for the credentialed teacher to interact with students on a one-to-one basis, to apply a diagnostic, prescriptive, and warm approach; and

4. Since paraprofessionals' salaries will be lower than for credentialed teachers, the teaching staff can be balanced more economically.

There is a significant feature to observe in using a differentiated staff structure which includes credentialed teachers and paraprofessionals. The traditional teacher-pupil ratio of 20-1, 25-1, or 30-1 has little relevancy in a differentiated teaching staff structure. The teacher-pupil ratio takes a new dimension in this type of structure. This dimension must be conceptualized with reference to an innovative formula that will differ, in some respects, from one school system to another. Generally, the number of teachers and paraprofessionals required will be dependent on the number of pupils involved in a curricular area, areas of teacher responsibility, and with the type of scheduling arrangement planned in terms of an overall instructional schema (large group instruction, small group instruction, laboratory instruction, and individualized instruction).

The aforementioned innovations in education are but a few that may be proposed to unshackle the New Mexico educational system from a slow-moving traditional vehicle. The ineffectiveness of the traditional curriculum is no longer questionable. Studies are no longer needed to make teachers and educators aware of the high school dropout rate, especially among Spanish-speaking students and Indian students--the need is too obvious. For too long we have taken the "easy way" and have rationalized that the pupil is slow, that dropouts' problems are apart from our area of responsibility, or that we need not induce students to continue their education beyond high school for they neither have the money or ability. Very often we practice a self-filling hypothesis with our students and, unfortunately, we fail to upgrade the educational expectations of too many pupils in our schools.

Let us suggest, for once, that our outmoded school system is at fault. It has some very apparent ills that require immediate attention. Some new programs will require money, others will require extra time. But let us "unhook" ourselves from traditional time and delve into planning activities that will promote and implement a new type of educational system in New Mexico--one that gives serious consideration to the improvement of learning and upgrades the educational level among all our young people in the State.

We can begin by calling for assistance from agencies and institutions that are forging ahead with development and implementation of new media, instructional techniques and curricula. In this light, the New Mexico educational system can be transformed from a "status quo," traditional type organization to a progressive and dynamic instructional system that will serve as a model for other geographical areas with similar educational needs and problems.